

MANAGEMENT UNIT - 4 - MORGAN RICH

Boundary Description

Morgan, Rich, Summit, and Weber counties - Boundary begins at the junction of I-80 and I-84 near Echo, Utah; northeast on I-80 to the Utah-Wyoming state line; north along this state line to SR-16; north on SR-16 to SR-39 near Woodruff; west along SR-39 to SR-167 (Trappers Loop road); south on SR-167 to SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80 and beginning point.

Unit Description

Management unit 4 prior to 1993, referred to the Wellsville mountains in Cache and Box elder counties. In 1993, unit boundaries were changed and unit 4 was created from parts of units 5, 6 and 7. Unit 4 incorporates the southeastern part of Weber county southeast of Huntsville, the northern half of Morgan county and Summit county and the southern portion of Rich county southwest of Woodruff. Municipalities along the unit boundaries include Woodruff, Huntsville, Mountain Green, Croydon and Echo.

Twelve of the 17 study sites in the unit occur along the I-84 corridor on critical winter range. Most winter range is located in the major drainages and on the slopes north of the Weber River. A detached, smaller wintering area is found on the south-facing slopes above Cottonwood Creek. These are the areas most highly developed by people. Highway I-80 and I-80N which run through Echo Canyon and along the Weber River, form the unit's southern boundary. There are several towns along the highways. Croydon is the only town in the unit not on I-80. Surrounding Croydon, the majority of the Lost Creek bottoms have been converted to alfalfa fields. Lost Creek Reservoir, managed by the Division of Parks and Recreation, is primitively developed and the road is not maintained in winter. However, approximately 1,320 snowmobilers, winter fishermen and other recreationists used the facilities during the 1985 winter months. Two areas of land in the unit are managed by the Division of Wildlife Resources. One area is north of I-84, just east of Morgan, and the other is north of I-84, between Henefer and Echo. The Henefer-Echo area is managed primarily as a big game habitat. Controlled grazing, vehicle restrictions and re-vegetation projects are major management tools.

The earlier inventory studies described six vegetation types. The sagebrush type is most common and is found over the whole area. It forms part of a continuum, based on moisture conditions, with the browse/sagebrush and browse types. The lower elevation sagebrush and browse/sagebrush types are productive and utilized heavily by deer, while the browse type mostly provides cover and is unavailable in many winters. The other types occupy comparatively little area, but have the potential to increase. Burns occur frequently in the unit, and unless seeded, production of desirable species is very low. Deer use the burned areas infrequently, possibly because of lack of cover. Although a very small area, the mahogany type is important to deer wintering in Cottonwood Canyon. The scattered juniper areas also are important in providing thermal cover, but produce little forage.

In severe winters, winter range is greatly reduced from the normal winter range. The upper limit is 6,500 feet on most of the unit. Acreage of all vegetation types, except agricultural land is reduced during severe winters. Range trend studies done in the unit occur on winter range. Most studies sample critical and/or heavily used areas.

The Lost Creek, Weber River, and Echo Canyon area are traditional deer wintering areas. There is considerable migration both from higher elevations in the unit and from other herd units to this area, especially during severe winters. The largest number of deer probably come from the East Canyon unit, where deer summer on the east side of the Wasatch Mountains. Development in Morgan Valley is disrupting this migration route. Deer also come from the Ogden and Coalville units which also have adequate summer range, but limited winter range.

Big Game Trends

The Lost Creek area provides critical habitat for wintering big game. The abundance of summer range, high productivity of the herds, and generally increasing numbers of big game animals leads to heavy use on the limited winter range in this part of the state. Development, the predominance of private land, and heavy impact from both livestock and big game has led to problems every winter. Approximately 86% of the deer summer range and 80% of the winter range is privately owned.

The current management objective is to maintain a winter herd population of approximately 12,500 deer with a post season minimum classification of 20 bucks per 100 does. Of those bucks, 30% will be 3-point or better. The management objective for elk is to achieve a target winter herd of 3,500 elk with a minimum of 40 bulls per 100 cows. Of those bulls, 50% will be 2 ½ years of age or older.

Study Site Description

Twelve trend study sites were read in 2001. Eight of these sites were originally established in 1984. Two sites were established in 1990, and 3 additional sites were added in 1996. All trend studies monitor big game winter range. Maps, trend assessments, and data for each study site follow. It should be noted that precipitation was above normal prior to the establishment of trend studies in 1984. Precipitation data from Morgan show above normal annual precipitation from 1982-1984. Precipitation was below normal during the 1990 readings and dry conditions prevailed from 1987 to 1994 at Morgan. Above normal precipitation was received during 1996 when the studies were reread. Dry conditions returned in 1999 and continued until 2001. Spring precipitation was poor in both 2000 and 2001 (Utah climate summaries 2001).

SUMMARY

HERD UNIT 4 - MORGAN RICH

Twelve trend study sites were read on Unit 4 in 2001. One site at Bennett Creek (4-12) was suspended. Seven of these trend studies sample mountain big sagebrush communities, 3 sites sample Wyoming big sagebrush communities, 1 samples a mixed mountain brush type, and 1 a Gambel oak community.

The major unit wide problem in Unit 4 is the poor condition and composition of the herbaceous understories. Most of the sites have understories dominated by annual grasses and weedy forbs. Due to the rocky nature of many of the sites in association with south aspects, soil temperatures are relatively high. This condition gives winter annuals a competitive advantage against native grasses, often under spring grazing regimes. Eight of the 12 sites sampled have significant amounts of annual grasses in the herbaceous understories. Average soil temperatures of these sites is nearly 71° F (70.6 ° F).

Soil trends are slightly down on many sites. The average soil trend for Unit 4 is 2.6, or slightly below stable. Many of the downward soil trends are the result of a decline in herbaceous cover, especially from annual grasses like cheatgrass. Eight of the 12 sites in Unit 4 support herbaceous understories that contain significant amounts of cheatgrass. Dry conditions during the spring of 2000, and 2001, caused a sharp decline in cover of cheatgrass. Average cover for cheatgrass on these eight sites was 20% in 1996, declining to 6% in 2001.

Browse trends on Unit 4 are generally stable to improving. The average browse trend for Unit 4 is 3.3, or between stable and slightly up. Browse trends were down at Owen's canyon (4-4) due to fire, and slightly down at Echo Canyon (4-2).

Herbaceous trends are generally improving. Average herbaceous trend on Unit 4 is 3.3. Many sites have shown an increase in nested frequency of perennial grasses and a decline in annual grasses like cheatgrass and Japanese brome. Annual forbs, on a few sites, increased dramatically due to the decline in annual grasses from the dry spring of 2001 followed by near normal precipitation in June.

Precipitation data from Morgan indicate above normal precipitation in 1980, 1982-1984, and 1985. Dry conditions prevailed for an extended period from 1987 through 1994. Precipitation was near normal in 1995 and wet in 1996 and 1998. Precipitation was again below normal in 1999, 2000, and 2001. Data from Morgan show that April precipitation in 1996 was 121% of normal. In 2000, April was dry, with only 43% of the normal precipitation received. June of 2000 was also extremely dry at only 27% of normal. Dry conditions prevailed during the spring of 2001. April precipitation at Morgan was normal but May precipitation was only 8% of normal in 2001 (Utah climate summaries 2001). These dry conditions during the spring caused a decline in frequency and cover of annual grasses on many sites.

A summary table of trends follows.

TREND SUMMARY

Location	Category	1984	1990	1996	2001
4-1 Heiner's Creek	soil	est	2	4	3
	browse	est	2	4	5
	herbaceous understory	est	3	5	3
4-2 Echo Canyon	soil	est	5	3	2
	browse	est	1	5	2
	herbaceous understory	est	3	5	4
4-3 Tank Canyon	soil	est	3	5	3
	browse	est	1	3	3
	herbaceous understory	est	5	4	4
4-4 Owen's Canyon	soil	est	3	4	2
	browse	est	3	3	1
	herbaceous understory	est	4	4	4
4-6 Harris Canyon	soil	est	1	5	2
	browse	est	3	5	3
	herbaceous understory	est	3	2	3
4-8 Shell Hollow	soil	est	1	5	2
	browse	est	3	3	3
	herbaceous understory	est	4	4	3
4-9 Scott Rees Ranch	soil	est	3	4	3
	browse	est	3	3	3
	herbaceous understory	est	3	2	4
4-12 Bennett Creek	soil		est	3	susp
	browse		est	1	susp
	herbaceous understory		est	2	susp
4-13 Wheatgrass Hollow	soil		est	3	3
	browse		est	3	4
	herbaceous understory		est	3	3

1 = down, 2 = slightly down, 3 = stable, 4 = slightly up, 5 = up, est = established, susp = suspended

Location	Category	1984	1990	1996	2001
4-14 Chapman Canal	soil	est	3	3	4
	browse	est	3	2	3
	herbaceous understory	est	3	4	3
4-15 Woodruff Creek South	soil			est	2
	browse			est	5
	herbaceous understory			est	4
4-16 Dry Hollow	soil			est	2
	browse			est	4
	herbaceous understory			est	2
4-17 Above Toon Ranch	soil			est	3
	browse			est	3
	herbaceous understory			est	3

1 = down, 2 = slightly down, 3 = stable, 4 = slightly up, 5 = up, est = established,
susp = suspended